

Nutrition Action

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 CENTER FOR SCIENCE IN THE PUBLIC INTEREST


Health for Her

“For too many years, medical research has paid too little attention to the leading causes of death and disability as they specifically affect women,” said then-Secretary of Health and Human Services Louis Sullivan in 1992 as the National Institutes of Health launched the Women’s Health Initiative (WHI), the largest clinical trial of women’s health ever done.

In 2002, the WHI reported that taking hormones after menopause could raise

the risk of breast cancer, heart attack, stroke, and blood clots. In 2006, the WHI announced that eating less fat didn’t lower the risk of breast or colon cancer, heart disease, or stroke.

A decade later, the WHI results have turned out to be more complex than they appeared. A women’s health expert and WHI investigator helps clarify them.

Continued on page 3.

MEMO FROM MFJ

Raw Oysters in Summer? No Thanks.



Summer means vacations and picnics (okay...and ice cream cones). But it also means *Vibrio vulnificus*.

Vv is a bacterium that infects oysters, especially in the Gulf of Mexico in warmer months. Every year,

some two dozen people who eat raw oysters become infected, and about half of them die. Considering that heart disease and cancer kill hundreds of thousands every year, *Vibrio vulnificus* infections are a much less critical concern. But *Vv* can shine a light on the dysfunctional way the government handles some health problems.

That raw oysters kill people has been known for years. Yet the solution has been known for just as long: when the Gulf is warm, pasteurize the oysters, which kills the bacteria. In fact, California has banned the sale of raw Gulf Coast oysters during the dangerous summer months.

The Center for Science in the Public Interest (publisher of *Nutrition Action*) has long pressed the Food and Drug Administration to prevent *Vibrio* illnesses. The FDA rejected our 1998 petition, and we've [sued the agency](#) to force it to respond to our 2012 petition.

For years the oyster industry has resisted change. It argues that the FDA long ago left regulation of shellfish to the states, who coordinate through an organization I suspect you have never heard of: the Interstate Shellfish Sanitation Conference (ISSC).



Raw oysters and summer don't mix.

When the FDA said in the 1990s that something needed to be done about the risks from eating raw oysters, the industry got the ISSC to bless a plan to refrigerate the oysters better on fishing boats and on shore, not to pasteurize or fully cook them. The FDA approved giving that a try for eight years.

The unnecessary deaths continued.

When we or others went to Congress to propose solutions, we ran into a formidable roadblock: the chairman of the powerful House Appropriations Committee, Bob Livingston, from the oyster-farming state of Louisiana.

Rep. Livingston left Congress in 1999, but still nothing has changed. Gulf Coast politicians, like Senators David Vitter of Louisiana and Bill Nelson of Florida, continue to protect the industry.

What is so frustrating is that an effective, inexpensive solution is available. But the industry doesn't want to be inconvenienced by processing oysters differently during part of the year. And the FDA apparently doesn't want to offend Congress or the industry, and might feel that it has bigger fish to fry.

Meanwhile, raw-oyster eaters continue to die.

Michael F. Jacobson, Ph.D., President
[Center for Science in the Public Interest](#)

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FOR WOMEN ONLY

- The signs of a **heart attack** or a **stroke** are different in women than in men.
- Women have a higher risk of **breast cancer** and **bone** and **muscle loss**.
- Women are more likely to suffer from **irregularity** and **urinary leakage**.

Here, from the pages of *NAH*, is what women need to know to stay healthy. Visit nutritionaction.com/women or send a check for \$20 and your name & address to CSPI—Women, Suite 300, 1220 L St. NW, Washington DC 20005.

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Health for Her

Getting it right

Cover image: Samsung worked with British artist Samira Harris to recreate a giant image of Botticelli's Venus, using 1,096 images uploaded by men and women of loved ones who have been affected by breast cancer.



JoAnn E. Manson

is a physician and professor of medicine at Harvard Medical School, professor of epidemiology at the Harvard T.H. Chan School of Public Health, and Chief

of the Division of Preventive Medicine at Brigham and Women's Hospital. She led the Boston site of the Women's Health Initiative and co-leads the VITamin D and Omega-3 Trial (VITAL) and the COcoa Supplement and Multivitamin Outcomes Study (COSMOS). Manson, who serves on NAA's Scientific Advisory Board, spoke to Bonnie Liebman.

BREAST CANCER

Q: Can you explain the recent diet findings from the Women's Health Initiative?

A: This is a [preliminary analysis presented](#) at the American Association for Cancer Research meeting last month by the lead author, Rowan Chlebowski, of the UCLA School of Medicine. It's an interesting re-analysis looking at whether a low-fat diet improved survival in women who developed breast cancer during the trial.

The [initial results](#) from 2006 showed that women assigned to a low-fat diet had an 8 percent lower risk of developing breast cancer than those assigned to eat their usual diet. It wasn't a statistically significant reduction, but rather was borderline.

However, additional information has come to light since then, and our follow-up has been extended. Among the women who were diagnosed with breast cancer during the trial, it looks like there was a 35 percent statistically significant reduction in the risk of dying of any cause.

Q: Did the women actually eat a low-fat diet?

A: They reduced their fat intake, but didn't reach the target. The goal was for them to get 20 percent of their calories from fat, but by the end of the study, they had only reduced their fat from 38 to 30 percent of calories. They did eat one more serving of fruits and vegetables per day, and they increased grains slightly.

Q: Is an eight-year study too short to look at death rates?

A: Yes. The WHI was designed to look at breast cancer incidence, not at deaths specifically. The problem with looking at deaths from breast cancer during such a short period is that they often occur many years later.

This new follow-up allows us to take a longer-term look at whether eating a lower-fat diet for eight years can improve survival.

Q: How might a lower-fat diet improve survival?

A: The diet did lead to some weight loss, at least in the early years of the trial. That may have reduced insulin levels, which could curb tumor growth. Or the diet could have reduced inflammation or changed the metabolism of sex hormones in breast tissue. Tumors that lead to poor survival were reduced the most.

Q: Should women eat less fat?


A: This study suggests that there may be benefits for women who have been diagnosed with breast cancer and for women who have an increased risk of breast cancer. But overall, I don't think there's strong evidence yet that all women should be going on a low-fat diet.

Q: Why not?

A: It could be that what mattered wasn't less fat, but a reduction in red meat or an increase in fruits and vegetables, or even a small amount of weight loss.

What the "Low-Fat" Group Ate

Goals	They went from:
20% of calories from fat	38% → 30%
5+ servings of fruits & veg	3.6 → 4.7 servings
6+ servings of grains	4.7 → 5.1 servings



The women in the "low-fat" group moved toward, but didn't meet, the study's goals for cutting fat and boosting fruits, vegetables, and grains. But those who were diagnosed with breast cancer during the trial had a lower risk of dying over the next 10 years.

I wouldn't make a strong case for restricting fat per se. In fact, a Mediterranean-diet study has suggested a reduced risk of breast cancer with a diet high in unsaturated fat from nuts or extra-virgin olive oil.

Q: So you wouldn't change your diet advice?

A: Not based on this study alone. Keep in mind that this is one report, and results of previous studies have been mixed.

All I can say now is that there is enough of a signal here to suggest that women at a higher risk for breast cancer may want to consider a dietary pattern like that tested in the WHI, with more fruits and vegetables and less fat.

But we know from other studies that eating more polyunsaturated or mono-unsaturated fats instead of saturated or trans fat, avoiding excess alcohol intake, eating more whole grains instead of refined grains, and not consuming sugar-sweetened beverages can lower the risk of heart attack, stroke, diabetes, and some forms of cancer.

Q: Critics say that the WHI showed that eating less saturated fat doesn't lower the risk of dying of heart disease. True?

A: That's an oversimplification. The trial was designed to look at breast cancer incidence. If the primary goal of the WHI had been to reduce cardiovascular disease, it would have had a different design. For example, it would have advised women to replace saturated with unsaturated fat. The WHI diet didn't focus on types of fat.

MENOPAUSE

Q: Have the WHI results led doctors to stop treating symptoms of menopause with hormones?

A: The use of hormone therapy has declined by about 80 percent since the WHI, but the trials' results have been misunderstood. The hormone therapy

trials were designed to answer a specific question: What is the balance of benefits and risks of hormone therapy when used to prevent heart disease and other chronic diseases?

The balance was not favorable for the average woman in the WHI, who was 63. Estrogen plus progestin increased the risk of breast cancer, heart attacks, strokes, and blood clots.

Q: How were the results of the WHI misunderstood?

A: The results have been extrapolated to women in their 40s and 50s who are struggling with severe menopausal symptoms—hot flashes, disrupted sleep, and impaired quality of life. But younger women have lower risks from hormone therapy than older women.

Yet these women often cannot find a physician who is willing to discuss hormonal treatments. This is really

For every 1,000 women in their 50s who took estrogen plus progestin for five years, we saw an extra three cases of breast cancer. The risk of heart attacks, strokes, and blood clots was also lower in younger than in older women.

But women in their 50s who took only estrogen did not have an increased risk of breast cancer, and they had a lower risk of heart disease.

Q: Why can a woman without a uterus take estrogen alone?

A: A woman with a uterus needs progestin because estrogen alone increases the risk of uterine cancer. If a woman has had a hysterectomy, she has no need for progestin.

Q: What should doctors do?

A: A woman who is having severe hot flashes, night sweats, and impaired quality of life should be evaluated and given options so she can make her own choices. We have many options now, both hormonal and non-hormonal.

And many women in early menopause are good candidates for treatment. They usually don't need to take the hormones for more than five years, while their symptoms are severe. And we now recommend the lowest effective dose.

Q: So you don't recommend hormones for older women?

A: No. We don't recommend starting hormone therapy if you're more than 10 years past the onset of menopause. The average age of menopause is 51.

The advertisement features a woman with blonde hair, Suzanne Somers, smiling and wearing a gold top. The text reads: "This is the Hormone Replacement Therapy I Use!" at the top. Below that, it says "BIOIDENTICAL HORMONES & WELLNESS" and "THE NEW WAY TO AGE". A quote from Suzanne Somers states: "Forever Health™ connects patients with doctors who can help them with Bioidentical Hormone Replacement Therapy (BHRT). Thanks to BHRT, I enjoy robust health, balanced hormones, strong bones, and the energy of someone half my age. So naturally, I am proud to be affiliated with Forever Health." The Forever Health logo is also present.

Suzanne Somers touts bio-identical hormones as "an amazing alternative to conventional replacement therapy." But there's no evidence that they're safer—and custom-compounded hormones may even be riskier—than FDA-approved hormones.

unfortunate, because the most effective treatment is estrogen—taken alone for a woman who has no uterus, and taken with progestin for other women.

Q: Wouldn't hormones raise their risk of breast cancer?

A: Women in the WHI who took a combination of estrogen and progestin did have a higher risk of breast cancer. But the absolute risk was lower for younger than for older women.

COMPOUNDED HORMONES

Q: Are custom-compounded hormones a problem?

A: Yes. About a third of the women who use hormone therapy now are taking hormones that are made in compounding pharmacies. There's a lot of concern about the safety, dose consistency, and purity of these hormones because the Food and Drug Administration doesn't have as much oversight of compounding

pharmacies as it has over facilities that manufacture FDA-approved medications.

Q: Are these compounded hormones marketed as bio-identical?

A: Yes. A bio-identical hormone is an exact chemical match to one made naturally by our bodies. But it's important for women to understand that there are many FDA-approved bio-identical hormones that come in pills, patches, gels, and sprays in a wide variety of doses.

So women interested in bio-identical hormones have many FDA-approved options to choose from. They don't need to go the custom-compounding route.

Q: Why do they?

A: They're being misled by unsubstantiated claims of greater safety and effectiveness. Since the WHI, many physicians are no longer up to date on prescribing FDA-approved hormones or won't prescribe them at all. To fill that void, women are turning to alternative remedies including compounding pharmacies.

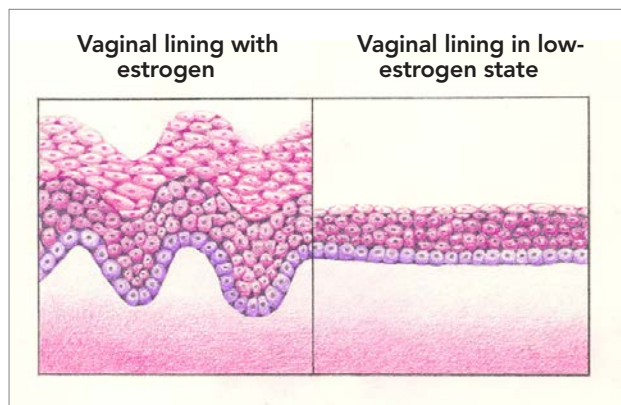
Q: Why do women think that compounded hormones are safer?

A: They often don't receive a package insert telling them about the risks. And some celebrities tout them. Suzanne Somers, for example, talks about how great the custom-compounded hormones are.

It's a serious problem because women are getting the message that these special custom-compounded formulas won't increase their risk of breast cancer or blood clots, heart disease, or stroke. But those are unsubstantiated claims. In reality, compounded products have similar or even greater risks than conventional hormone therapy.

Q: Because they could be contaminated, like the steroid injections that killed 64 people in 2012?

A: Yes. There's worry about contamination. And you may not be getting what you think. The doses may be inconsistent, or



Low-dose vaginal estrogen tablets, rings, and creams can prevent the lining of the vagina from thinning after menopause. But many women—and doctors—don't know about them.

you may not be getting enough progesterin to prevent endometrial cancer.

Across the board, professional associations like the [North American Menopause Society](#), the [American College of Obstetricians and Gynecologists](#), and the [Endocrine Society](#) are saying that women who use hormones should take FDA-approved hormones you can get in regular drug stores, rather than the custom compounds, unless you have unique needs like an allergy to an ingredient in the commercial preparation.

VAGINAL ATROPHY

Q: What else should women know about menopause?

A: Low doses of vaginal estrogen are safe and effective to prevent vaginal dryness and discomfort with sexual activity—or what's now called genitourinary syndrome of menopause. It occurs in at least 45 percent of women.

This syndrome, which we used to call vaginal atrophy, is progressive. Unlike the hot flashes and the night sweats, which tend to get better within a decade after menopause, vaginal atrophy gets worse. And it can have adverse effects on sexual function.

Q: Are low doses of vaginal estrogen also safe for older women?

A: Yes. With low-dose vaginal estrogen, only minimal amounts of the hormone are absorbed into the blood. Many women aren't being told about vaginal estrogen, because few doctors have the training to

prescribe these medications.

Q: And they're scared about the black-box warning?

A: Yes. After the results of the WHI trial were published, the FDA required that warning on all hormone therapy products. It warns that these hormones can increase the risk of breast cancer, heart attack, stroke, and blood clots.

We've been working with the FDA to modify the label, so it explains that low-dose vaginal estrogen raises blood levels far less than pills, patches, and gels.

The black-box warning scares women and physicians, and as a result women are being denied treatment.

BEYOND THE WHI

Q: The Women's Health Initiative aside, what can women do to lower their risk of disease?

A: We know from a number of studies that about 80 percent of heart attacks and strokes and up to 90 percent of cases of type 2 diabetes may be preventable by



Even brisk walking is good exercise.

lifestyle modifications. But only about 5 percent of the population has adopted all of those practices.

Q: Like what?

A: Moderate-to-vigorous exercise at least 30 minutes a day, not smoking,

Hot Flash in the Pan?

“Clinically proven soy isoflavones for hot flash relief,” says Estroven, a soy and black cohosh supplement. “Clinically tested formula shown to help relieve hot flashes, night sweats,” says Promensil Menopause, which contains red clover.

Many women look for “natural” supplements to treat hot flashes and night sweats. Do they work? Here’s the evidence for some popular supplements, as well as for exercise and muscle relaxation.



■ **Soy.** Four trials of supplements that contain at least 30 milligrams of the soy isoflavone genistein reduced hot flashes by roughly 10 to 50 percent.¹

The catch: many supplement labels don’t disclose genistein levels. And only one of seven brands of soy-containing menopausal supplements tested by

consumerlab.com contained at least 30 mg of genistein. So your chances of ending up with a soy supplement that might work are pretty slim.



■ **Red clover.** Studies consistently find that red clover doesn’t reduce hot flashes any more than a placebo.¹ The most popular brand is Promensil.

■ **Black cohosh.** In 16 trials in more than 2,000 women, black cohosh was no more effective than a placebo in reducing the frequency of hot flashes or lowering menopausal symptom scores.²

■ **Exercise.** Women who exercise report fewer hot flashes. But the two largest studies found that cardio workouts didn’t reduce hot flashes. If exercise helps you, don’t stop. More studies are needed.³ And it’s a win-win for your health.

■ **Paced breathing and muscle relaxation exercises.** Two small studies found that meditation-like exercises had no effect on the frequency of hot flashes, but that’s too little evidence to reach a conclusion.⁴

—David Schardt

¹ *Cochrane Database Syst. Rev.* 12: CD001395, 2013.

² *Cochrane Database Syst. Rev.* 9: CD007244, 2012.

³ *Cochrane Database Syst. Rev.* 11: CD006108, 2014.

⁴ *Cochrane Database Syst. Rev.* 7: CD008582, 2014.

maintaining a healthy weight, having a healthy diet with fruits and vegetables, fish, a lowered intake of red meat, and whole grains instead of refined grains.

Q: Why do you sometimes say that exercise is magic?

A: Exercise is as close to a magic bullet as we’ve found in modern medicine. The number of health outcomes that are favorably affected by exercise is amazing.

If there were a pill that you could take that would lower your risk of heart attacks, strokes, diabetes, osteoporosis, cancer, and cognitive decline, and it had virtually no risk, wouldn’t everyone be clamoring to take it?

Q: Is brisk walking enough?

A: Yes. It doesn’t have to be strenuous or vigorous exercise. You don’t even have to work up a heavy sweat. The biggest benefits come from going from being sedentary to being moderately active even for 30 minutes a day.

And we also have evidence that prolonged sitting is deleterious, even after accounting for the amount of

recreational activity a person gets. And we have some evidence that we can use digital technology to influence behavior, like sending text messages that remind people to get up and walk.

Q: Are supplements worth taking?

A: Overall, trials that tested megadoses of the antioxidant vitamins beta-carotene, vitamin C, and vitamin E didn’t show a reduced risk of heart disease, stroke, cancer, diabetes, or other health problems.

Our VITAL trial is now testing vitamin D and omega-3 fats for the prevention of heart attacks, strokes, cancer, diabetes, and other outcomes. We should be getting those results by 2018.

And we recently started a trial of multivitamins and cocoa flavanols in amounts higher than what you tend to get in chocolate. The flavanols are promising for improving blood vessel function and perhaps lowering the risk of heart attacks and strokes.

And we want to see if multivitamins can reduce the risk of cancer in women, as they did in an earlier trial in men. 🍓

Bottom Line

■ Lose (or don’t gain) excess weight.

■ Shoot for 30 to 60 minutes a day of moderate-to-vigorous aerobic exercise.

■ Eat at least five servings of fruits and vegetables a day.

■ Drink alcoholic beverages only occasionally.

■ If you have severe symptoms in early menopause, consider taking hormones for five years or less.

■ If you’re more than a decade past the onset of menopause, avoid starting hormones. But low-dose vaginal estrogen is still an option.

■ Don’t assume that custom-compounded hormones advertised as “bio-identical” are safer than FDA-approved hormones.

■ Don’t get X-rays or CT scans unless you’re sure they’re necessary. (For more information, see cdc.gov/nceh/radiation/ionizing.htm.)

By the Numbers...

Many causes of death are linked to diet & exercise

BY BONNIE LIEBMAN & LINDSAY MOYER

"If medical error were considered a disease, a new study has found, it would be the third leading cause of death in the United States, behind only heart disease and cancer," reported the *New York Times* in May.

The new study, based largely on a 2000-2002 study of Medicare patients, estimated that roughly 250,000 deaths per year are due to medical errors.¹ That's less than the two leading causes of death—heart disease and cancer—which hover around 600,000 each.

But those population-wide numbers obscure differences among age groups. For people aged 45 to 84, cancer is the leading killer (see below). Lung cancer alone accounts for roughly 158,000—27 percent—of all cancer deaths, followed by colorectal (49,000), breast (40,000), and prostate (26,000) cancer.²

In the table below, we've colored all causes of death that are at least partly related to diet and exercise. That includes Alzheimer's disease, because a healthy diet and exercise can lower your odds of other kinds of memory loss that are hard to distinguish from Alzheimer's. 🍌

Leading Causes of Death by Age Group, 2013

Rank	25-34	35-44	45-54	55-64	65-74	75-84	85+	ALL AGES
1	Accidents 16,209	Accidents 15,354	Cancer 46,185	Cancer 113,324	Cancer 155,552	Cancer 153,214	Heart Disease 242,469	Heart Disease 611,105
2	Suicide 6,348	Cancer 11,349	Heart Disease 35,167	Heart Disease 72,568	Heart Disease 98,432	Heart Disease 147,255	Cancer 98,792	Cancer 584,881
3	Homicide 4,236	Heart Disease 10,341	Accidents 20,357	Accidents 17,057	COPD & Emphysema 35,603	COPD & Emphysema 49,346	Alzheimer's Disease 56,152	COPD & Emphysema 149,205
4	Cancer 3,673	Suicide 6,551	Liver Disease 8,785	COPD & Emphysema 15,942	Stroke 18,722	Stroke 36,151	Stroke 54,729	Accidents 130,557
5	Heart Disease 3,258	Homicide 2,581	Suicide 8,621	Diabetes 13,061	Diabetes 17,279	Alzheimer's Disease 23,073	COPD & Emphysema 42,245	Stroke 128,978
6	Diabetes 684	Liver Disease 2,491	Diabetes 5,899	Liver Disease 11,951	Accidents 10,967	Diabetes 19,587	Influenza & Pneumonia 26,641	Alzheimer's Disease 84,767
7	Liver Disease 676	Diabetes 1,952	Stroke 5,425	Stroke 11,364	Kidney Disease 8,524	Accidents 14,438	Accidents 20,537	Diabetes 75,578
8	HIV/AIDS 631	Stroke 1,687	COPD & Emphysema 4,619	Suicide 7,135	Blood Infection 7,693	Influenza & Pneumonia 13,949	Kidney Disease 17,239	Influenza & Pneumonia 56,979
9	Stroke 508	HIV/AIDS 1,246	Blood Infection 2,445	Blood Infection 5,345	Influenza & Pneumonia 7,441	Kidney Disease 13,317	Diabetes 16,885	Kidney Disease 47,112
10	Influenza & Pneumonia 449	Influenza & Pneumonia 881	HIV/AIDS 2,378	Kidney Disease 4,947	Liver Disease 7,087	Parkinson's Disease 10,549	Hypertension 13,991	Suicide 41,149

Source: [Natl. Vital Stat. Rep. 65 \(2\): 1, 2016](#). ¹[BMJ 2016. doi:10.1136/bmj.i2139](#). ²[Cancer Facts & Figures 2016, American Cancer Society](#).

Note: COPD is chronic obstructive pulmonary disease.

Stomach Cancer Defense



Worldwide, stomach cancer kills more people than any cancers other than lung and liver. U.S. stomach cancer rates have plummeted in the last 85 years, but five-year survival rates are still only around 30 percent.

According to a new update by the American Institute for Cancer Research, here's how to lower your risk:

- **Avoid processed meats.** That includes any meat that's been preserved by smoking, curing, or salting, or with additives like nitrites. Some examples: bacon, ham, bologna, hot dogs, and some sausages.

- **Lose (or don't gain) excess pounds.** People who are overweight or obese have a greater risk.

- **Minimize salt-preserved foods.** Studies in East Asia find a higher risk in people who consume pickled vegetables and salted or dried fish, but the evidence is insufficient in other regions of the world.

- **Limit alcohol.** People who consume three drinks a day have a higher risk.

The new report found only limited evidence that eating grilled, broiled, or barbecued meat or fish or eating too little fruit increases stomach cancer risk.

wcrf.org/sites/default/files/Stomach-Cancer-2016-Report.pdf

Can Coffee Prevent Liver Cancer?



Can coffee lower your risk of liver cancer? The European Prospective Investigation into Cancer and Nutrition, a study that has tracked more than 520,000 people from 10 countries for 15 years, suggests that it does.

Researchers compared the coffee intakes reported by 125 healthy people who were later diagnosed with the most common liver cancer (hepatocellular carcinoma) to the intakes reported by 250 similar people without the disease.

Those who drank at least 2½ cups of coffee a day had a 75 percent lower risk

of liver cancer than those who drank less than 1¼ cups a day. What's more, the coffee drinkers had lower blood levels of interleukin-6 (an indicator of inflammation) and other markers of liver injury, which could explain how coffee may protect the liver.

The study didn't look at decaf and regular coffee separately.

What to do: It's too early to aim for four cups of coffee a day to protect your liver. Keep in mind that one venti at Starbucks holds 2½ cups, and that caffeinated coffee can make you jittery and increase the risk of miscarriage.

But if you enjoy coffee, there's no reason to stop. Researchers also find that coffee drinkers have a lower risk of type 2 diabetes, and that caffeinated coffee lowers the risk of Parkinson's disease.

[Am. J. Clin. Nutr. 102: 1498, 2015](http://Am.J.Clin.Nutr.102:1498,2015)

Red Meat & the Pancreas

Diets high in red meat—beef, pork, lamb, and veal—may raise the risk of pancreatic cancer.

Researchers tracked roughly 528,000 AARP members who filled out diet questionnaires.

After 10 years, men who reported eating the most red meat (at least 8.5 oz. a day) had a 40 percent higher risk of pancreatic cancer than men who ate the least (2.2 oz. or less). Those who ate the most red meat cooked at high temperature also had a higher risk than those who ate the least.

The scientists found no link in women, who ate less red meat and were less likely to be diagnosed with pancreatic cancer than men.

The researchers found evidence that certain AGEs (advanced glycation end products) could help explain the link between red meat and pancreatic cancer. AGEs, which increase when foods are cooked at high temperatures, may harm the pancreas by causing inflammation and insulin resistance.

What to do: This study doesn't prove that red meat causes pancreatic cancer. But it's worth shooting for no more than 18 oz. per week to lower your risk of colorectal cancer.

To lower AGEs, cook meats at lower temperatures or steam, stew, or poach rather than broil, grill, roast, fry, or sear them. Marinating meats in marinades that contain vinegar, lemon juice, or other acidic liquids can also lower AGEs. 🍷

[Am. J. Clin. Nutr. 101: 126, 2015](http://Am.J.Clin.Nutr.101:126,2015)



MANNING UP



Tackling sleep apnea, beer bellies, & “low T”

BY DAVID SCHARDT

June is Men’s Health Month—time for clichés about how men take much better care of their cars than their own bodies. And it’s an opportunity to rattle married couples with the news that women live an average of five years longer than men.

It’s probably *not* news that men are twice as likely as women to have not seen a doctor for at least two years. So it’s no surprise that of the 15 leading causes of death in the United States, only one—Alzheimer’s disease—claims more women than men. Here are three things for men to think about this June.

1 Sleep Apnea

On the night Supreme Court Justice Antonin Scalia died last February, his CPAP machine was on the nightstand next to his bed. It wasn’t plugged in.

Scalia was one of an estimated 25 million Americans with obstructive sleep apnea. Most don’t know they have it.

People with sleep apnea stop breathing for 10 seconds or more at a time, as many as 300 or 400 times a night. Each bout usually ends with a snort, as breathing begins again.

What causes it? In obstructive apnea, the most common kind, the muscles at the back of the throat relax and block the airway.

The cause of Scalia’s death was never determined—the family didn’t want an autopsy—but there was speculation in the media that sleep apnea may have played a role.

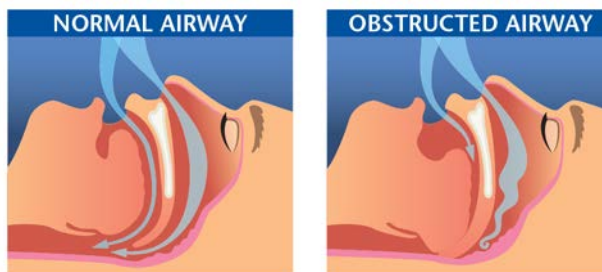
“Sleep apnea can be a deadly disease,” says Ronald Chervin, director of the Sleep Disorders Center at the University of Michigan.

It’s not that you die from lack of oxygen on the spot. Restricted breathing pushes the body into a “flight-or-fight” response, part of which involves diverting (oxygen-rich) blood to the brain. That means blood vessels constrict and the heart rate increases. With the oxygen supply already reduced, that can damage the circulatory system, especially if it happens night after night.

“Many years of untreated sleep apnea likely kills many people through cardiovascular events like strokes, heart attacks, or arrhythmias,” explains Chervin.¹ “When the person dies, it’s not usually recorded that the sleep disorder had a role in pushing them toward that outcome.”

Scalia had some of the classic characteristics of apnea patients: he was an older male, overweight with a thick neck, and a smoker.

“Obesity plays a big role in the devel-



If the muscles in the back of your throat relax when you sleep (right), it can pinch off the flow of air.

opment of apnea,” says Chervin. Extra weight can mean more fat deposits in the soft tissue that surrounds the throat, which can obstruct breathing.

Among 690 randomly selected middle-aged Wisconsin residents, those whose weight increased by 10 percent or more over a four-year period were six times as likely to develop moderate-to-severe sleep apnea as those who didn’t gain weight.²

While putting on pounds can make

apnea worse, shedding them can make it better. Among 49 obese Swedish men who cut their calories enough to lose an average of 27 pounds over a year’s time, apnea episodes fell from an average of 36 an hour to 19.³

Researchers estimate that men are twice as likely as women to have sleep apnea.⁴ “We’re not sure why,” says Chervin. “One suspicion is that women are protected by the hormones estrogen and progesterone, which stimulate respiration and may help prevent muscles of the upper airway from collapsing.”

Tellingly, when those hormones decline with menopause, “women’s susceptibility to apnea seems to catch up to a good degree to men’s,” says Chervin.

How can you tell if you have sleep apnea and should see a doctor?

Loud snoring is one clue. Often the first alarm is raised by a spouse who is fed up with being kept awake night after night (although snoring isn’t necessarily a sign of sleep apnea).

Sleepiness during the day is another warning sign.

“People with sleep apnea can be sleepy all the time,” says Chervin. “They fall asleep during a one-on-one conversation with their boss, or while they’re driving, or sometimes even in very unlikely situations such as during sex.”

If a doctor suspects that you have sleep apnea, you’ll probably spend a night at a sleep clinic, where you’ll be attached to electrodes and sensors that record your sleep as well as the frequency of any apnea episodes.

The gold standard treatment is a CPAP (continuous positive airway pressure) machine. You wear a mask over your nose while you sleep, and the machine supplies pressurized air to keep your throat open.

Endangered Males



Beginning in the womb, males are more likely than females to die at every age.

Among the diseases more common in men:

- heart disease
- lung cancer (men smoke more)
- bladder cancer
- pancreatic cancer
- leukemia
- Parkinson's disease
- skin cancer (men spend more time in the sun and are less likely to use sunscreen)
- ALS, or Lou Gehrig's disease
- alcoholism (men drink and binge more)

"Those who use it regularly have the greatest likelihood of eliminating their sleep apnea," says Chervin.

If you can't tolerate the CPAP, there's surgery, or oral devices that fit between your teeth and help maintain an open upper airway.

"But for some people, those devices will not completely eliminate their apnea," notes Chervin.

When treatment is successful, it can change your life.

"People report that they feel more refreshed in the morning, they think and work better, and they treat other people around them better," says Chervin.

"And if that's not enough, we tell them they'll look younger and more attractive."

In a study that used sophisticated three-dimensional cameras, Chervin and his colleagues at the University of Michigan took pictures of the faces of 20 adult apnea patients before and after they had slept with CPAP machines for at least two months.

"A panel of 22 raters, who didn't know which photos were taken before and which were taken after, were twice as likely to judge that the subjects looked more alert, youthful, or attractive in the after photos than in the before photos," says Chervin.⁵

2 Beer Belly

What's with middle-aged and older men and pot bellies?

"Men are designed to store fat in their abdomens as visceral fat, but most of them have exceeded their storage capacity," says Deborah Clegg, who studies sex hormones and body fat distribution at the Cedars-Sinai Medical Center in Los Angeles.

Visceral fat is packed deep in the abdomen around the liver, kidneys, and other organs. It's the pot in pot bellies.

Women, on the other hand, are programmed to store more of their fat subcutaneously—that means just be-

neath the skin—in their hips and thighs. "That's the fat they can draw on to support the energy needs of pregnancy and breastfeeding," notes Clegg.

Why did men and women evolve to store fat so differently?

"One possibility," says Michael Jensen, an endocrinologist at the Mayo Clinic, "is that you can probably move or run more quickly if you're storing fat in the upper body rather than in your legs."

That's important if you're a hunter.

"Another advantage of visceral fat is that it's got a lot of immune cells and responds very vigorously to injury," notes Jensen. "Visceral fat can actually wrap itself around abdominal organs that are damaged during hunting or fighting and ward off infections, increasing the chances of surviving."

But few men today need to move quickly to survive. And few suffer life-threatening abdominal injuries from hunting or fighting.

In lean men, visceral fat is useful. It efficiently removes fat from the bloodstream, stores it, then quickly puts it back into the blood when needed for energy, Jensen explains.

But for many of today's men—whose hunting excursions are largely confined to searching for the TV remote—visceral fat becomes a liability.

When we continually consume more calories than we need, visceral fat piles up. What happens, says Jensen, is that our subcutaneous fat cells, which normal-

ly would soak up most of the extra calories, can't keep up.

"If the subcutaneous fat can't do its job, visceral fat becomes the fallback storage place," he says.

And that's not good. Large deposits of visceral fat are linked to an increased risk of cardiovascular disease, diabetes, and cancer.⁶

"If you have a lot of fat in your body, you want to store it in your hips and thighs, because that fat depot is not linked to disease," notes Clegg.

The good news: If you lose weight, most of the first pounds that come off will be from your belly.

"When the vast majority of people lose weight through improved eating habits and more physical activity," says Jensen, "they're going to preferentially lose visceral fat."

(That doesn't mean you can target belly fat with a particular diet or exercise.)

As weight loss progresses, people typically begin to lose equal amounts of subcutaneous and visceral fat.⁷

An exception may be people in their late 70s or early 80s, says Jensen. "We think that fat cells only live about three to seven years," he explains. "After that, we need new ones to replace the old ones that die."

But older people may run out of some of the precursor cells in their subcutaneous fat, notes Jensen.

"So they lose some of their subcutaneous fat depot and retain visceral fat."⁸

3 Testosterone

Low T (the "T" is for testosterone) is a medical condition concocted by drug companies a number of years ago to drive sales of their pricey prescription hormone patches and gels.

But you don't see so many ads for low-T products these days. Perhaps manufacturers have been sobered by the 3,500 lawsuits that men have filed against them, alleging that they've suffered heart attacks and other problems after taking testosterone.

Or maybe they backed off after the Food and Drug Administration stressed last year that testosterone is approved “only for men who have low testosterone levels caused by certain medical conditions.”

(Mumps, some cancer treatments, undescended or injured testicles, HIV/AIDS, tuberculosis, and pituitary gland tumors, among other things, can suppress testosterone production. Taking testosterone may help restore sexual function, energy levels, and physical strength in those men.)

The FDA also strengthened the warning notice on labels that testosterone might increase the risk of heart attacks and strokes.

And the agency reminded physicians (and drug companies) that giving men testosterone to treat declining levels as they age “has not been proven safe and effective”...“even if a man’s symptoms seem related to low testosterone.”

Testosterone typically declines slowly and steadily after about age 30, just as complaints about energy level, libido, sexual performance, and muscle weakness pick up.

Despite the controversy over testosterone, there’s still huge interest in it, says Bradley Anawalt, an endocrinologist at the University of Washington.

“It’s the elixir of youth du jour for men right now,” says Anawalt. “We see patients all the time asking about testosterone.”

Some have low hormone levels or the symptoms of testosterone deficiency, and some don’t. Often, they’re just complaining that they don’t feel as young any more.

“If you have a modestly low level of testosterone, but no specific

symptoms, there’s little evidence to suggest that you will benefit from testosterone replacement,” says Anawalt.

“If a man’s hormone level is consistently a little low, my first advice is often to make some lifestyle changes that can return testosterone to higher levels.”

Topping the list: lose weight. “Overweight or obese men who lose 7 percent or more of their body weight and combine that with exercise can raise their testosterone levels,” says Anawalt.²

Exercise, including sexual activity, raises levels, though they fall back within an hour.

“Cutting back on drinking alcohol will help,” notes Anawalt, “since excessive consumption of alcohol suppresses testosterone levels.”

As for using testosterone patches and gels, the research has been inconsistent and any

benefits have been modest.

“But a big new study called the Testosterone Trials, which was published this year, provides some hope that older men with low testosterone levels and specific complaints that may be related to testosterone deficiency may benefit from hormone replacement,” says Anawalt.

Researchers from the University of Pennsylvania and other institutions recruited 790 men aged 65 or older who had consistently low blood levels of testosterone (below 275 nanograms per deciliter).¹⁰ The men, who reported decreased libido, difficulty walking or climbing stairs, or fatigue, were randomly assigned to apply a testosterone gel or a placebo gel to their

upper arms and shoulders once a day.

After one year, the testosterone-gel users had increased their sexual activity, were more likely to go farther during a walking exercise, and reported that their energy was better than the placebo-gel users.

The big concern with testosterone replacement: Is it safe?

“No consensus exists yet,” says Anawalt.

“Some well-publicized studies suggested that testosterone increased the risk of heart attacks, while other studies that didn’t get as much attention found no safety problems.”

Unfortunately, no long-term safety study is in the works. 🍌

Flunking the “T” Test

You can’t trust supplement advertisements, even in high-end magazines. Take the ads for these two “natural” testosterone boosters. One appeared in *Smithsonian* magazine and one in *Popular Science* this spring.

■ **M Drive** contains KSM-66, a concentrated extract of the herb ashwagandha. In two studies, a total of 46 young men randomly assigned to take KSM-66 had no higher testosterone levels after 8 to 12 weeks than 50 similar men randomly assigned to take a placebo.^{1,2}

■ We found no studies testing **Enrichment**—a mixture of four plant extracts—on testosterone levels.

So it’s no surprise that the manufacturer didn’t respond to our inquiries asking for evidence.

¹ [Evid. Based Complement. Alternat. Med. 2013; 571420, 2013.](#)

² [J. Int. Soc. Sports Nutr. 12: 43, 2015.](#)



¹ [Vasc. Health Risk Manag. 12: 85, 2016.](#)
² [JAMA 284: 3015, 2000.](#)
³ [BMJ 342: d3017, 2011.](#)
⁴ [WMJ 108: 246, 2009.](#)
⁵ [J. Clin. Sleep Med. 9: 845, 2013.](#)
⁶ [Physiol. Rev. 93: 359, 2013.](#)
⁷ [Int. J. Obes. 32: 619, 2008.](#)
⁸ [Aging Cell 9: 667, 2010.](#)
⁹ [Obes. Res. 11: 689, 2003.](#)
¹⁰ [N. Engl. J. Med. 374: 611, 2016.](#)



Bulgur Basics

BY KATE SHERWOOD

Bulgur—whole wheat that has been steamed, dried, and cracked—is the easiest whole grain. Just soak it in water and it's ready to eat. The hotter the water, the quicker it's done. 🍷

Got a question or suggestion? Write to Kate at healthycook@cspinet.org.



Veggie Sauté with Bulgur

Don't want to read the recipe? Just chop and sauté 4 cups of whatever vegetables are in the bin, toss with soaked bulgur, season, and enjoy.

- ½ cup bulgur
- 2 Tbs. extra-virgin olive oil, divided
- ½ lb. small zucchini, chopped
- ½ red bell pepper, chopped
- ½ yellow bell pepper, chopped
- 1 bunch scallions, chopped
- freshly ground black pepper, to taste
- ¼ tsp. kosher salt

Soak the bulgur in ¾ cup of hot water for at least 10 minutes. • Meanwhile, in a large non-stick pan, heat 1 Tbs. of the oil over medium heat. Sauté the zucchini until lightly browned, 2-3 minutes. Remove from the pan. • Sauté the peppers and scallions in the remaining 1 Tbs. of oil until they start to brown, 2-3 minutes. Return the zucchini to the pan and stir in the bulgur. • Cook while stirring until the bulgur is hot and any water is absorbed, 1-2 minutes. Season with black pepper and up to ¼ tsp. of salt. • Serves 4.

Per serving (1 cup): calories 160
total fat 7 g | sat fat 1 g
carbs 21 g | fiber 4 g
protein 4 g | sodium 140 mg



Tomato Eggplant Bulgur

The eggplant will absorb all the oil and may look dry at first. Don't worry. As the eggplant cooks, it will release some oil, allowing it to brown.

- ½ cup bulgur
- 3 Tbs. extra-virgin olive oil
- 1 small Italian eggplant (about ½ lb.), cut into ½" pieces
- ½ cup no-salt-added crushed tomatoes
- pinch red pepper flakes (optional)
- ½ cup basil and/or parsley leaves, chopped
- ½ tsp. kosher salt

Soak the bulgur in ¾ cup of hot water for at least 10 minutes. • Meanwhile, in a large non-stick pan, heat the oil over medium-high heat. Sauté the eggplant, turning occasionally, until it starts to release some oil and browns on 2 or 3 sides, 5-8 minutes. • Stir in the tomatoes and red pepper flakes. Simmer until the eggplant is tender, 3-5 minutes. • Stir in the bulgur and cook until any liquid is absorbed, 1-2 minutes. • Remove from the heat and stir in the herbs. Season with up to ½ tsp. of salt. • Serves 4.

Per serving (1 cup): calories 180
total fat 10 g | sat fat 1.5 g
carbs 19 g | fiber 5 g
protein 3 g | sodium 260 mg



Fruit & Bulgur Salad

You can use just about any fruit (try apple, pineapple, or grapes), and replace some or all of the arugula with just about any soft herbs (try basil, parsley, or cilantro) or chopped salad greens.

- ½ cup bulgur
- 1 Tbs. fresh lemon juice
- 1 Tbs. extra-virgin olive oil
- ¼ tsp. kosher salt
- 1 nectarine or plum, pitted and chopped
- 3 cups lightly packed baby arugula or spinach, chopped
- ¼ cup toasted almonds or sunflower seeds

Soak the bulgur in ¾ cup of hot water until tender, about 15 minutes. Drain any water that hasn't been absorbed. • Meanwhile, in a large bowl, whisk together the lemon juice, oil, and salt. • Toss with the bulgur, nectarine, arugula, and almonds. • Serves 4.

Per serving (1 cup): calories 150 | total fat 7 g
sat fat 1 g | carbs 19 g | fiber 4 g | protein 4 g
sodium 130 mg



Smoothie Reviews

BY LINDSAY MOYER & BONNIE LIEBMAN



Smoothies are hot. They're on the menu at Dunkin' Donuts, McDonald's, Pinkberry, Starbucks, Jamba Juice, and, of course, Smoothie King. And homemade smoothies are so popular, say market watchers, that they've boosted sales of frozen fruit and blenders.

Companies are cashing in on the smoothie craze with frozen fruit-veggie blends, frozen "thaw & go" cups, breakfast smoothies, and more. Which are the best? Here's the scoop.

The information for this article was compiled by Camilla Peterson.

Frozen Blends

It's a snap to make your own smoothie.

Step 1: Toss some fruit and low-fat (or non-dairy) milk into a blender.

Step 2: Press "blend."

Ta-daah!

For some starter combos, see "Make Your Own Smoothie" on page 15. Or

veggies.) Still, all three varieties are Best Bites.

Those three are your go-to blends. Here are two that don't live up to their names:

■ **Jamba Fruit & Veggie.** Added sugar means no Best Bite. What's more, the veggies are dwarfed by the fruit, and the Green Fusion has more sugar and modified food starch than broccoli or spinach.

■ **Dole Power Shakers.** "Taste like fruit, not veggies," say the labels. No surprise there. Dole doesn't add many veggies. They're mostly fruit and milk with some added sugar and vitamins.



Brimming with berries and cherries. A real taste favorite.

pick up a frozen smoothie blend (which is mostly frozen fruit) at the market. Look for brands with no added sugar or juice. That's how we chose our Best Bites.

If the bag says to blend with juice, use water, milk (dairy or non-dairy), or a mix of milk and plain yogurt instead. (After all, why add juice to fruit?) Dairy or soy milk means more protein, calcium, and other nutrients. And fruit is healthier than juice.

Our faves:

■ **Earthbound Farm Organic Smoothie Kickstart.** All four varieties are Best Bites. And you get more veggies than in most brands. The first ingredient in the Kale Berry is kale.

■ **Wyman's of Maine.** The Strawberries, Blueberries & Cherries with Kale is a Best Bite...and a real taste treat. It's got more fruit than veg, but doesn't skimp on the kale.

■ **Dole Fruit & Veggie Blends.** "Each blend is a carefully selected mixture of all-natural fruits and vegetables," says the bag. Despite names like "Fruit 'n Greens," you're getting way more fruit than vegetables. (Fruit is fine, but you may have bought it for the



Mostly mangos, oranges, pineapple, & bananas. Mmm.

Blends Have More Fun

Best Bites (✓✓) have no added sugars or juice. **Our chart gives numbers for one serving of each blend plus ¾ cup of low-fat milk.**

Products are ranked from least to most total sugars, then least to most calories, then most to least protein.

Frozen Smoothie Blends

(about 1½ cups prepared)

	Calories	Total Sugars (tsp.)*	Protein (g)	Calcium (% DV)
✓✓ Earthbound Farm Organic Kickstart ¹	130	4.5	7	25
✓✓ Wyman's of Maine Strawberries, Blueberries & Cherries with Kale	140	4.5	7	30
Jamba At Home ¹	150	5	9	25
✓✓ Simply Balanced (Target) Organic Fruit & Kale	150	5	7	25
Dole Power Shakers ¹	160	5	11	30
✓✓ Dole Fruit & Veggie Blends ¹	160	5	7	25
Jamba Fruit & Veggie ¹	150	5.5	7	25
Dole Shakers ¹	170	5.5	10	35
Simply Balanced (Target) Organic Island Blend	180	7.5	7	25
Market Pantry (Target)—Berry or Berry Banana ¹	200	7.5	8	30

✓✓ **Best Bite.** ¹Average. *2.5 teaspoons of sugar occur naturally in the ¾ cup of milk we used to prepare each smoothie. The chart lists total sugars because labels don't break down how much sugar is added and how much occurs naturally in the fruit. *Note: To convert teaspoons of sugar to grams, multiply by 4.2.*

Protein Daily Target: 75 grams. **Calcium Daily Value (DV):** 1,000 mg.

Source: company information. The use of information from this article for commercial purposes is strictly prohibited without written permission from CSPI.



Dairy & Almond

While frozen smoothie blends are mostly fruit, dairy smoothies are mostly drinkable yogurt...or kefir or skyr, yogurt's European cousins. Don't expect much fruit.

Our Best Bites have no added sugars (or questionable or unsafe sweeteners). They also have no more than 150 calories and 2 grams of saturated fat per cup, plus at least 6 grams of protein (what you'd get in ¾ cup of milk). Honorable Mentions can have added sugar (though our calorie limit eliminates the higher-sugar ones).

Tip: Many 16 oz. smoothie labels

give calories, etc., for an 8 oz. serving, even though most people are likely to drink the entire bottle. In our chart, a serving is the whole bottle, except for large (32 oz.) bottles, where we use an 8 oz. serving. These are worth a sip:

■ **B'more Organic Skyr Smoothie.** All six thick and creamy flavors, like Caffè Latte and Mango Banana, are Best Bites. B'more uses (safe) stevia instead of sugar. The skyr—that's Icelandic (think Greek) yogurt—packs 15 to 20 grams of protein into each cup.

■ **Lifeway Perfect 12 Kefir.** With flavors like Key Lime Pie and Apple Pear Cobbler, you'd expect scads of sugar. Instead, all four Best Bites are made with stevia. Kefir (a type of cultured milk) is more tart than skyr. And the 11 grams of protein per cup is nothing to sneeze at.

■ **Stonyfield OP.** Milk protein concentrate boosts the protein (to 15 grams in a 10 oz. bottle). Stevia and erythritol (another safe sweetener) stand in for most of the added sugar. Two of the three flavors are Honorable Mentions.

■ **Siggi's Swedish Style Filmjölk.** Like any low-fat plain drinkable yogurt, Siggi's version is a Best Bite. The other flavors—all Honorable Mentions—have only about 1½ teaspoons of added sugar per cup, says Siggi's. They're lower in protein (8 grams per cup) than smoothies made from skyr or kefir.

■ **Smart Ones Smart Delights.** Stevia replaces some added sugar in these frozen milk-fruit-yogurt "Thaw & Go" smoothies.

■ **Lifeway Protein Kefir.** All four flavors have 160 calories per cup, so they just miss an Honorable Mention. But Protein Kefir has no more added sugar than most of Lifeway's other kefirs, the company told us. The extra calories come from added whey protein concentrate, which boosts the protein to 20 grams per cup.

Don't waste your calories on these:

■ **Bolthouse Farms Breakfast Smoothies.** A "Perfectly Protein Fruit + Yogurt + Whole Grain Smoothie" may sound good. But



An Honorable Mention rich in protein & calcium.

the Strawberry Parfait flavor has more (nutrient-poor) apple juice than yogurt or strawberry purée. The Peach Parfait isn't much better. And their "10g of protein per bottle" ain't much for 360 calories, some of them from added sugar.

■ **Naked Nutmilk Smoothies.** The Berry Almond has more apple juice than almond milk or blackberry purée. Its 11 grams of protein (from almonds and soy protein isolate) come at a cost: 330 calories per 15 oz. bottle. The Peachy Almond has "only" 300 calories.

■ **Bolthouse Farms Blueberry Banana Almondmilk Smoothie.** "It's dairy-free bliss at 110 calories per serving," says the website. Each 15 oz. bottle lets you blissfully swallow about 210 calories, added sugar (agave), just 2 grams of protein, and (maybe) 7 almonds.

Some Like 'em Tart

Best Bites (✓✓) have no added sugars, no unsafe or questionable sweeteners, no more than 150 calories and 2 grams of saturated fat per cup, and at least 6 grams of protein per cup.

Honorable Mentions (✓) have the same criteria, but can have added sugars. Products are ranked from least to most total sugars, then least to most calories, then most to least protein.

Kefir Smoothies—multi-serve (8 oz.)

	Calories	Total Sugars (tsp.)*	Protein (g)	Calcium (%DV)
✓✓ Wallaby Organic Lowfat Plain	90	1.5	8	30
✓✓ Trader Joe's Low Fat Plain	100	2.5	9	30
✓✓ Siggi's Swedish Style Filmjölk Plain	100	2.5	8	35
✓✓ Lifeway Nonfat Plain	90	3	11	30
✓✓ Lifeway Lowfat Plain—regular or Organic ¹	110	3	11	30
✓✓ Lifeway Perfect 12 ¹	110	3	11	30
✓✓ Helios Organic Greek Nonfat Original	120	3	16	30
Lifeway Organic Whole Milk Plain ^F	160	3	10	30
✓ Siggi's Swedish Style Filmjölk flavored ¹	120	4	8	35
✓ Lifeway Lowfat flavored—regular or Organic ¹	140	5	11	30
✓ Helios Organic Greek Nonfat flavored ¹	150	5	16	30
✓ Wallaby Organic Lowfat flavored ¹	150	5	7	25
Lifeway Organic Whole Milk flavored ^{1,F}	190	5	10	30
✓ Lifeway Nonfat flavored ¹	150	6	11	30

Dairy Smoothies (1 bottle, 6-10 oz.)

Dannon Light & Fit Protein (9.5 oz.) ^{1,5}	120	2.5	12	40
✓ Stonyfield OP—except Chocolate (10 oz.) ¹	190	3.5	15	60
✓ Smart Ones Smart Delights (8 oz., frozen) ¹	120	4	6	20
Stonyfield OP Chocolate (10 oz.)	200	4.5	15	50
Stonyfield Organic (6 oz.) ¹	140	5.5	6	20
Dannon Activia (7 oz.) ¹	160	6	6	20

Dairy or Almond Smoothies (1 bottle, 15-16 oz.)

✓✓ B'more Organic Skyr ¹	230	4	36	30
Naked Nutmilk ¹	320	7	11	8
Bolthouse Farms Blueberry Banana Almondmilk	210	7.5	2	4
Lifeway Protein Kefir ¹	320	9.5	40	60
Bolthouse Farms Breakfast ¹	360	11	11	40

✓✓ Best Bite. ✓ Honorable Mention. ¹Average. ^FContains 5 grams of saturated fat. ⁵Contains sucralose and acesulfame-potassium. *The chart lists total sugars because labels don't break down how much sugar is added and how much occurs naturally in the dairy ingredients or fruit. Note: To convert teaspoons of sugar to grams, multiply by 4.2.

Juice Not Worth It



Ignore "servings of fruit."

Juice

Juice smoothies are mostly juice plus fruit or vegetable purée. They may have a health halo, but none are Best Bites.

That's because you're better off eating whole fruit or veggies. People are less likely to compensate for liquid calories—even if they come from 100% juice—by eating less food later. So juice can help pad your waistline.

And some juice smoothie labels are, let's just say, pretty smooth. Here are a few of their tricks:

■ **No sugar added.** "NO SUGAR ADDED," says Naked Boosted Blue

Machine. True, but a 15 oz. bottle has 320 calories and 13 teaspoons of naturally occurring sugar, mostly from (nutrient-poor) apple juice plus some puréed banana and berries.

■ **How many servings?** "3 3/4 servings of fruit per bottle," says the 15 oz. bottle of Bolthouse Farms C-Boost. As the asterisk on the label notes, a half cup (4 oz.) of juice counts as a serving of fruit. (Don't blame *us*. The U.S. Department of Agriculture counts juice as fruit.) So *any* 15 oz. bottle of juice has 3 3/4 servings of fruit. (C-Boost is a mix of juice and purée.)

■ **Mostly apple juice?** "Strawberries, raspberries and blackberries all together in one smoothie? Whoa. It's like a tiny farmers market in my hand," says Naked Pure Fruit Berry Blast. Tiny, indeed. Each 15 oz. bottle has only a handful of berries (5 blackberries, 4 raspberries, and 4 strawberries). Most of the Berry Blast is apple juice.

■ **Greens?** Trader Joe's Very Green smoothie may look like a bottle of kale juice, but it's mostly apple juice, fruit purées, and pineapple juice, with less than a tenth of an ounce of "dried greens blend." Other smoothies with just a smidgen of greens: Bolthouse Farms Green Goodness, Naked Boosted Green Machine (with "10 green turbo-nutrients"), and Odwalla Original Superfood.

■ **Vitamins & Fiber.** "32% daily value fiber per serving," says Bolthouse Farms Multi-V Goodness Cherry. "100% daily value of 13 essential vitamins per serving."

So what? Bolthouse adds those 13 vitamins to its mostly-apple-juice smoothie. And much of the fiber comes from dextrin and inulin, not fruit purée. Those processed fibers may not have the same benefits as fiber-rich whole grains, fruits, vegetables, and beans. 🍌



Mostly apple juice, not broccoli, spinach, and kale.

We didn't award any **Best Bites** because liquid calories in juice are more likely to lead to weight gain than whole fruits and vegetables. Products are ranked from least to most calories, then least to most total sugars, then most to least protein.

Juice Smoothies (1 bottle, 11-12 oz.)

	Calories	Total Sugars (tsp)*	Protein (g)
Suja Organic Noon Greens	110	5	2
True Organic Kaleifornia	150	6	3
Evolution Fresh Green Grove	180	8.5	3
Evolution Fresh Defense Up	190	11	0
Suja Elements Organic Green Charge	210	7.5	2
Suja Organic Green Delight	210	9.5	1
True Organic Bunched Greens	210	10.5	3
Suja Organic Mango Magic	220	10.5	1
Evolution Fresh Protein Power ¹	240	7.5	19

Juice Smoothies (1 bottle, 15-16 oz.)

Bolthouse Farms Berries & Green Veggies	170	8	2
Bolthouse Farms C-Boost	210	10.5	2
Naked Veggies Sea Greens	240	11	3
Odwalla C Monster ¹	240	12	2
Naked Veggies Berry Veggie	250	8	10
Odwalla Original Superfood	250	11.5	2
Bolthouse Farms Green Goodness	250	12	4
Naked—Chia or Pure Fruit ¹	260	12	2
Trader Joe's Very Green	260	13.5	2
Bolthouse Farms Multi-V Goodness ¹	270	10	2
Naked Boosted Green Machine	270	12.5	4
Evolution Fresh Defense Up	270	15.5	0
Odwalla Mango Tango	290	13	4
Bolthouse Farms Blue Goodness	300	13	2
Naked Boosted—Blue or Red Machine ¹	320	12.5	3
Evolution Fresh Protein Power ¹	340	11	27
Naked Protein ¹	420	12.5	30

¹Average. * All sugars in the smoothies occur naturally (in the drinks' fruit and vegetable purées and juices). Note: To convert teaspoons of sugar to grams, multiply by 4.2.

Make Your Own Smoothie

Fruit juice? Added sugar? Not in these smoothies from The Healthy Cook. You can use fresh or frozen fruit.



Berry Red

Blend 1 cup of watermelon with 1/2 cup of berries and a squeeze of fresh lime juice. (80 calories)



Tropical Yellow

Blend 1/2 cup each of pineapple and mango with half a banana. Thin with water if needed. (140 calories)



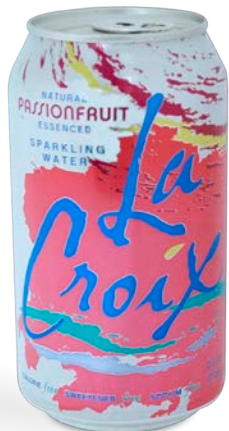
Cool Green

Blend 1/2 cup each of pineapple and honeydew melon with 1/4 cup each of cucumber and baby spinach. (80 calories)



RIGHT STUFF

Better Bubbles



“How seltzer water became cooler than Coke,” read the *Washington Post* blog headline last summer.

Sales of sparkling water have doubled over the last five years, while sales of soda pop have plummeted. Gotta love those trajectories.

What’s driving the bubbly-water boom? It’s the new crop of unsweetened flavored carbonated waters that trend-spotters have, um, spotted.

There’s **Dasani Sparkling**,

Nestlé Pure Life Exotics, **Perrier**, plenty of store brands, and our favorite, **LaCroix**. Like the others, the only ingredients in LaCroix—it’s pronounced la-CROY—are carbonated water and natural flavor.

(Watch out for sucralose-sweetened impostors like Glacéau fruit-water, which also contains food dyes, and cans of sugar-sweetened San Pellegrino fruit juice drinks.)

What we love about LaCroix: the flavors. Try **Pamplemousse** (grapefruit). Or **Melón Pomelo** (cantaloupe pink grapefruit). Or **Passionfruit**.

The downside: like just about all cans, the linings almost certainly contain BPA. The National Institute of Environmental Health Sciences has expressed “some concern” about BPA’s “effects on the brain, behavior, and prostate gland in fetuses, infants, and children at current exposure levels.”

So think of LaCroix as a great occasional treat, especially in the summer. Of course, it beats sugary soda *any* time of year.

lacroixwater.com—(888) 241-7360



FOOD PORN

Double Trouble

Legend has it that the ice cream sandwich was invented in 1899 by a pushcart peddler on New York City’s Lower East Side. It consisted of a layer of vanilla ice cream pressed between two small, thin graham wafers.

Oh, for the good old days.

“Our **Double Scoop Warm Cookie Sandwiches** combine two scoops of ice cream with three warmed cookies garnished with



your choice of rainbow sprinkles, chocolate sprinkles or almonds,” says **Baskin-Robbins’** website.

“Choose your cookies. Choose your ice cream. Choose your toppings.” Is that fun or what?

Let’s say you choose three dark chocolate chunk cookies, two scoops of vanilla ice cream, and sprinkles. Presto!

You’ve picked close to half a day’s calories (880), more than a day’s saturated fat (25 grams), 16½ teaspoons of (mostly added) sugar, and a pile of white flour.

You might as well strap a half-full 1½-quart tub of Breyers Chocolate Ice Cream around your neck.

The best part: the sandwich is *portable*, so you can work off its calories while you chew! Granted, it’s gonna melt long before you walk briskly for three hours. As if.

If you find yourself at a Baskin-Robbins, your best bet is a kid-size scoop of ice cream or frozen yogurt in a cake cone. The pushcart is optional.

baskinrobbins.com—(800) 859-5339

DISH of the month



Japanese Green Salad

Combine 1 Tbs. rice vinegar, 1 Tbs. reduced-sodium soy sauce, 1 tsp. toasted sesame oil, ½ tsp. minced garlic, and ½ tsp. minced ginger. Toss with 2 cups chopped salad greens, 1 cup edamame, 1 cup chopped avocado, and 1 cup chopped cucumber. Serves 2.

quick tip

Avoid “mechanically tenderized” beef. Poking dozens of tiny blades or needles into a steak can push any bugs on the surface—*E. coli*, for example—deep inside, where they can survive if the meat is only cooked to rare or medium-rare.